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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/510,221	09/12/2007	Rolf-Dieter Pavlik	2002P03968WOUS	6239

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Intellectual Property Department
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EXAMINER	
KIM, EDWARD J	
ART UNIT	PAPER NUMBER
2155	
MAIL DATE	DELIVERY MODE
05/12/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/510,221	PAVLIK ET AL.	
	Examiner	Art Unit	
	EDWARD J. KIM	2155	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *25 October 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *11,14,16, 20-23, and 31-33* is/are pending in the application.

4a) Of the above claim(s) *12,13,15,17-19 and 24-30* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *11,14,16 20-23, and 31-33* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *25 October 2007* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. This office action is in response to the Amendment filed on 10/25/2007.

2. Claims 11, 14, 16, 20-23, and 31-33 are pending in this office action. Claims 12, 13, 15, 17-19, and 24-30 have been cancelled by the Applicant. Claims 11, and 20-22 have been amended. Claims 31-33 have been newly added.

Response to Amendment

3. It is stated on page 4 of the Amendment filed on 10/25/2007 that claims 1-30 have been cancelled by the Applicant. However, claims 1-10 have already been cancelled in the Preliminary Amendment filed on 10/01/2004. Claims 12, 13, 15, 17-19, and 24-30 have been cancelled on the Amendment filed on 10/25/2007, for which the Examiner is currently replying to. Appropriate corrections should be made on subsequent communications.

4. The Examiner withdraws previous objections to the Drawings. The Examiner accepts the amendments made to the Drawings.

5. The Examiner withdraws previous objections to the Specification. The Examiner accepts the amendments made to the Specification.

6. The Examiner withdraws the Double Patenting rejection due to the Terminal Disclaimer filed on 10/25/2007.

7. The Examiner withdraws the 101 Rejection regarding claim 11.

Specification

8. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: "First transport layer" and "second transport layer" are not defined in the specification with further detail for one in the ordinary skill in the art to understand what each limitation represents.

Claim Rejections - 35 USC § 112

9. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

10. Claims 31-33 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Regarding claim 31, the specification fails to discuss or properly identify the terms "first transport layer" and the "second transport layer" with nay level of detail to enable one of ordinary skill in the art. The specification fails to support the claim language in the description and to provide any further details as to how "first transport layer" and "second transport layer" is determined and/or used.

Due to the dependency of claim 31, claims 32-33 are rejected under the same grounds of rejection.

11. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

12. Claims 31-33 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 31, "First transport layer" and "second transport layer" is unclear and indefinite to what the terms represent. In the disclosure, in paragraphs [0029] and [0030], there is reference to the transport layer of the OSI reference model, however, there is no indication of a "first" and a "second" transport layer. The Examiner interprets these limitations as best understood for examination purposes.

Due to the dependency of claim 31, claims 32-33 are rejected under the same grounds of rejection.

Claim Rejections - 35 USC § 103

13. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

14. Claims 11, 14, 16, 20-22, and 31-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kuchlin et al. ("HIGHROBOT: Telerobotics in the Internet", Copyright 1997),

hereinafter referred to as Kuchlin, in view of Rathjen et al. (US Publication #2004/0015383 A1), hereinafter referred to as Rathjen.

Kuchlin discloses, a system that comprises of a web server that has full access to the Internet and its Web-technologies as well as industrial automation functionalities.

Regarding claim 11, Kuchlin discloses, a web server for controlling an automation device (Kuchlin, Abstract, section 1, section 2, section 3.2, section 4. Kuchlin discloses a web server for carrying out web server functionalities as well as industrial automation functionalities.), comprising: a processor; a standard operating system that executes on the processor; a real-time operating system that executes on the processor (Kuchlin, Abstract, section 1, section 2, section 3.2, section 4. Kuchlin discloses a web server, for carrying out web server functionalities and industrial automation functionalities, which incorporates real-time operating system.); a first software module that provides a web page and that executes on the processor via the standard operating system (Kuchlin, Abstract, section 1, section 3.2, section 4.1. Kuchlin discloses a system that has full access to the internet and its web technologies, where web browsers are utilized.); third software module providing an automation functionality to control the automation device and having an interface to the real-time operating system (Kuchlin, Abstract, section 1, section 2, section 3.2, section 4. Kuchlin discloses a web server, for carrying out web server functionalities and industrial automation functionalities, which incorporates real-time operating system.); and an application programming interface (Kuchlin, Abstract, section 1, section 2, section 3.2, section 4, section 5. Kuchlin discloses that the software used in the system is designed according to object-oriented paradigm, for example programmed in C++ and JAVA, which utilizes APIs.); and a connection to the Internet for access to at least one of the software

modules via the application programming interface (Kuchlin, Abstract, section 1, section 2, section 3.2, section 4, section 5. Kuchlin discloses a system for carrying out web server functionalities as well as industrial automation functionalities, where the software used in the system is designed according to object-oriented paradigm, which utilizes APIs, for example, programmed in C++ and JAVA.).

Although Kuchlin discloses the use of web-based distributed object computing (Kuchlin, section 5), Kuchlin fails to explicitly disclose the use of XML. Rahtjen discloses, a method, device, and a system for collecting, visualizing and/or modifying operating data of at least one machine pertaining to the tobacco processing industry. Rathjen further discloses the use of an XML parser (56) and an XML processor (64) (Rathjen, paragraph [0008]. Rathjen discloses the use of XML web authoring language). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teachings of Kcuhlin with those of Rathjen to utilize XML language. One would have been motivated to do so, as it was known in the art that XML is a standard way of structuring data (syntax), which allows the user to define own proprietary data syntax and further build own proprietary tools with ease.

Regarding claim 14, Kuchlin disclosed the limitations as described in claim 11, and further discloses wherein internet protocols are provided for communication in the system (Kuchlin et al., Section 3.2, Section 4.1, Section 4.2, Section 4.3. Kuchlin discloses that the system is implemented on a common interface protocol, the Internet protocol.). It would have been obvious at the time the invention was made, to utilize the Internet protocol between the software modules themselves and for communication between the software modules and components outside the web server. One would have been motivated to do so to standardize the

communication interface of the system, to minimize conflict caused by utilizing different protocols and to minimize adaptation to other protocols in the system itself.

Regarding claim 16, Kuchlin disclosed the limitations as described in claim 11, and further discloses wherein the web server is adapted to configure and administrate the software modules (Kuchlin, section 4.2.2, section 4.2.4).

Regarding claim 20, Kuchlin disclosed the limitations as described in claim 11, and further discloses wherein the automation device is a computer numerical controlled machine (Kuchlin, Abstract, section 1, section 2, section 3.2, section 4, section 4.2. Kuchlin discloses a web server for carrying out web server functionalities as well as industrial automation functionalities.).

Regarding claim 21, Kuchlin disclosed the limitations as described in claim 11, and further discloses wherein the automation device is a drive (Kuchlin, Abstract, section 1, section 2, section 3.2, section 4, section 4.2. Kuchlin discloses a web server for carrying out web server functionalities as well as industrial automation functionalities.).

Regarding claim 22, Kuchlin disclosed the limitations as described in claim 11, and further discloses wherein the automation device is a valve (Kuchlin, Abstract, section 1, section 2, section 3.2, section 4, section 4.2. Kuchlin discloses a web server for carrying out web server functionalities as well as industrial automation functionalities.).

Regarding claim 31, Kuchlin discloses, an automation system that controls an automation device via the Internet, comprising (Kuchlin, Abstract, section 1, section 2, section 3.2, section 4. Kuchlin discloses a web server for carrying out web server functionalities as well as industrial automation functionalities.); a first web server, comprising; an application programming

interface (Kuchlin, Abstract, section 1, section 2, section 3.2, section 4, section 5. Kuchlin discloses that the software used in the system is designed according to object-oriented paradigm, for example programmed in C++ and JAVA, which utilizes APIs.), a software module for providing an automation functionality to control the automation device via the application programming interface and to directly access a first transport layer, and a first connection to the Internet via the first transport layer, the connection for access to the software module by a client via the application programming interface; a second connection to the Internet via a second transport layer directly accessible by the industrial automation system, wherein the automation device is directly accessible from the Internet via the second transport layer, and wherein the automation device is accessible form the first transport layer via the second transport layer (Kuchlin, section 1, section 3.2, section 4, section 4.1, section 4.2. Kuchlin discloses the use of TCP/IP in the system. It is well-known in the art that the TCP/IP is the best-known example of a Layer 4 Protocol - supported by paragraph [0026] and [0031] of the disclosure by the Applicant. Kuchlin also discloses remote access and control via the internet.).

Regarding claim 32, Kuchlin disclosed the limitations as described in claim 11, and further discloses wherein the industrial automation device is a computer numerical controlled machine (Kuchlin, Abstract, section 1, section 2, section 3.2, section 4, section 4.2. Kuchlin discloses a web server for carrying out web server functionalities as well as industrial automation functionalities.).

Regarding claim 33, Kuchlin disclosed the limitations as described in claim 11, and further discloses, wherein the industrial automation device is a drive (Kuchlin, Abstract, section

1, section 2, section 3.2, section 4, section 4.2. Kuchlin discloses a web server for carrying out web server functionalities as well as industrial automation functionalities.).

15. Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kuchlin et al. ("HIGHROBOT: Telerobotics in the Internet", Copyright 1997), hereinafter referred to as Kuchlin, in view of Rathjen et al. (US Publication #2004/0015383 A1), hereinafter referred to as Rathjen, in further view of Modeste et al. (US Pub. #2003/0056012 A1), hereinafter referred to as Modeste.

Regarding claim 23, Kuchlin disclosed the limitations as described in claim 11, however, fails to *explicitly* disclose the use of a firewall for connection to the Internet. The use of a firewall for security purposes is well-known in the art as evidenced by Modeste et al. Modeste et al. discloses a web server comprising a connection to the internet utilizing a firewall (Modeste, fig.4, paragraph [0041]). It would have been obvious to one of ordinary skill in the art at the time the invention was made, to implement a firewall into the teachings of Kuchlin, as shown by Modeste, to prevent unauthorized access to the web server and the industrial automation system.

Response to Arguments

16. Applicant's arguments with respect to claim 11 have been considered but are moot in view of the new ground(s) of rejection. A secondary reference is provided for the newly added limitation in claim 11.

17. Applicant's arguments filed 10/25/2007 have been fully considered but they are not persuasive. For explanation purposes, refer to the US Pub. #2005/0228872 A1, which is the published version of the Applicant's application.

As per claim 14, the Applicant argues,

"Kuchlin … does not teach or suggest using the internet protocols between the modules residing on the server." (refer to pg.10 under the heading, "Response to Rejections under 102" of the Amendment filed on 10/25/2007)

Examiner respectfully disagrees.

Kuchlin discloses, a system which has full access to the Internet and its Web-technologies (see Abstract). Furthermore, the system is implemented on common interface protocols, including the Internet protocol (section 3.1, section 3.2, section 4.1, section 4.2, section 4.3), and TCP/IP (section 3.2). It is unclear to the Examiner whether the Applicant is referring to the expansion modules being linked with standard interfaces, such as API or CGI, (refer to paragraph [0025] of the Applicant's disclosure), or the use of the OSI layer in the system (refer to paragraphs [0029] and [0030]) – the fifth layer for communication between applications, such as software modules.

It is disclosed by the Applicant that the expansion modules are linked with standard interfaces, such as API or CGI, which were well-known in the art at the time the invention was made, as indicated by the Applicant (refer to paragraph [0025] of the Applicant's disclosure). Kuchlin discloses the use of object-oriented paradigm, programmed in C++ and JAVA, which include APIs, and were commonly utilized for CGI.

The OSI reference model is explained by the Applicant in paragraph [0029] and [0030], which is a basic architecture reference that describes the structure and function of protocols for data communication, "an architecture model that is frequently used". "The fifth layer of the OSI reference model, known as the session layer, administers connections between the applications" (refer to paragraph [0030] of the Applicant's disclosure). Kuchlin discloses the system to be implemented on a network protocol such as the Internet protocol and TCP/IP (section 3.2), wherein the OSI reference model serves as the backbone of network communications. As the fifth layer of the OSI reference model administers connections between applications, it would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize it for communication between applications residing on or outside of the web server. One would have been motivated to do so, for compliance to a standard set for the network system.

Conclusion

Examiner's Note: Examiner has cited particular columns and line numbers in the references applied to the claims above for the convenience of the applicant. Although the specified citations are representative of the teachings of the art and are applied to specific limitations within the individual claim, other passages and figures may apply as well. It is respectfully requested from the applicant in preparing responses, to fully consider the references in entirety as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior art or disclosed by the Examiner.

In the case of amending the claimed invention, Applicant is respectfully requested to indicate the portion(s) of the specification which dictate(s) the structure relied on for proper interpretation and also to verify and ascertain the metes and bounds of the claimed invention.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Edward J. Kim whose telephone number is (571) 270-3228. The examiner can normally be reached on Monday - Friday 7:30am - 5:00pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Salch Najjar can be reached on (571) 272-4006. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Edward J Kim/
Patent Examiner, Art Unit 2155

/saleh najjar/

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